7. Julia

Program Name: Julia.java Input File: julia.dat

Julia, your neighbor, has recently become obsessed with prime numbers. She wants to know how many prime numbers exist within the first 100 numbers. She knows you're a good programmer, so she asks you for help with this problem. You, being the great friend you are, know Julia will ask follow-up questions past the first 100 so decide to write a program to find the number of prime values before any given value.

Input: The first input line will contain a value N ($1 \le N \le 100$) that denotes the number of input lines that follow. Each additional input line will contain a single value V ($1 \le V \le 10^{10}$) being the number Julia has asked about.

Output: Output the number of prime values less than or equal to the queried value V.

Sample input:

Sample output:

25 168 1229